

IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Malena Rosa Mesarina and Yoshio Frank Turner

Serial No.:

Examiner:

Filing Date: 06/29/01

Group Art Unit:

Title: LOW POWER SCHEDULING FOR MULTIMEDIA SYSTEMS



COMMISSIONER FOR PATENTS  
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

- (x) under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of national application; or before mailing date of first office action on the merits; whichever occurs last)
- ( ) under 37 CFR 1.97(c) together with either a:
  - ( ) Statement under 37 CFR 1.97(e), or
  - ( ) a \$240.00 fee under 37 CFR 1.17(p), or  
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)
- ( ) under 37 CFR 1.97 (d) together with a:
  - ( ) Statement under 37 CFR 1.97(e), and
  - ( ) a petition under 37 CFR 1.97(d)(2), and
  - ( ) a \$130.00 petition fee set forth in 37 CFR 1.17(i).  
(Filed after final action or notice of allowance, whichever occurs first, but before payment of the issue fee)

Please charge to Deposit Account 08-2025 the sum of \_\_\_\_\_. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account 08-2025 pursuant to 37 CFR 1.25.

(X) Applicant(s) submit herewith Form PTO 1449 - Information Disclosure. Citation together with copies, of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

( ) A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individuals(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.

It is requested that the information disclosed herein be made of record in this application.

"Express Mail" label no. EL920819173US

Date of Deposit 06/29/01

I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to: Commissioner for Patents, Washington, D.C. 20231.

By Anthony Chou  
Typed Name: Anthony Chou

Respectfully submitted,

By William A. Zarbis  
William A. Zarbis

Attorney/Agent for Applicant(s)  
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Date: 06/29/01

<b>FORM PTO-1449</b>  <b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</b>  (Use several sheets if necessary)	<b>ATTY. DOCKET NO.</b> 10010939	<b>SERIAL NO.</b> 11002 U.S. PTO 09/895048
	<b>APPLICANT</b> Mesarina et al.	
	<b>FILING DATE</b> 06/29/01	<b>GROUP</b>

**REFERENCE DESIGNATION U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS

**FOREIGN PATENT DOCUMENTS**

	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	TRANSLATION	
						YES	NO

**OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)**

1	"SCHEDULING FOR REDUCED CPU ENERGY", Weiser et al., Xerox PARC, Palo Alto CA, First Symposium on Operating Systems Designs & Implementation (OSDI)
2	"POWER CONSCIOUS FIXED PRIORITY SCHEDULING FOR HARD REAL TIME SYSTEMS", Shin et al., Seoul Nat. University, Seoul, Korea
3	"SCEDULING ALGORTIHMS FOR MULTIPROGRAMMING IN A HARD REAL TIME ENVIRONMENT", Liu et al., Massachusetts Institute of Technology, CA Institute of Technology, Journal of the Assoc. for Computing Machinery, vol. 20, No.1, January 1973, pp. 46-61
4	"COMPARING ALGORITHMS FOR DYNAMIC SPEED-SETTING OF A LOW-POWER CPU", Govil et al., Computer Science Division, USC, Berkeley, CA
5	"POWER OPTIMIZATION OF VARIABLE VOLTAGE CORE-BASED SYSTEMS", Hong et al., Computer Science Dept., UCLA, LA, CA, Electrical Engineering Dept., UCLA

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## U.S. PATENT DOCUMENTS

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## FOREIGN PATENT DOCUMENTS

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						YES	NO

## OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

6	"A SCHEDULING MODEL FOR REDUCED CPU ENERGY", Yao et al., Xerox Palo Alto Research Center, Palo Alto, CA, 19955

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